

# Addressing the Energy-Water Nexus: The Next Wave of Challenges and Solutions

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Putting Customers First 

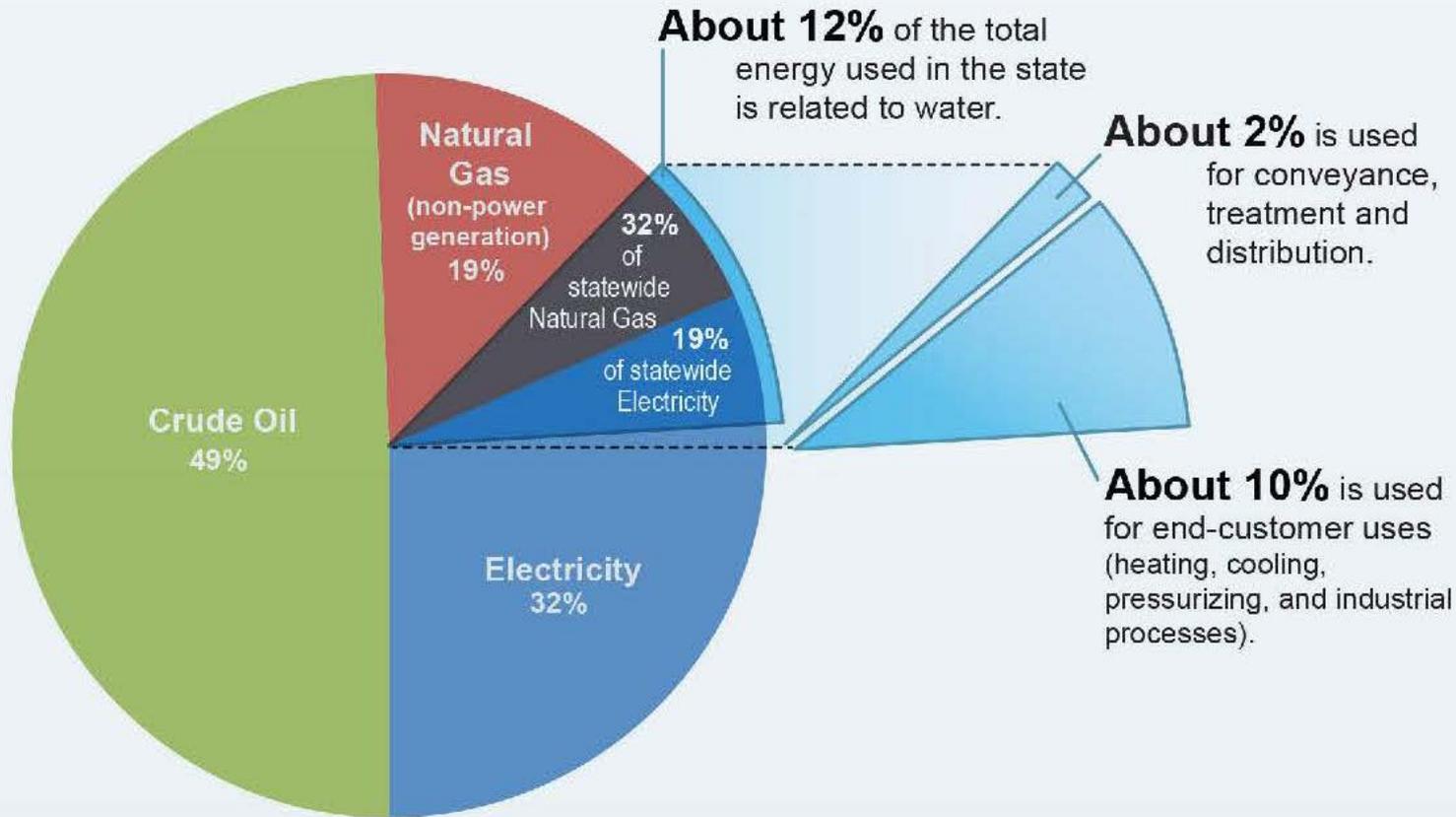
# Overview of LADWP

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- Established 1902 to deliver water to Los Angeles; electrical distribution began in 1916.
- Largest municipal utility in the USA, covers LA's 465 square miles
- Over 4 million residents in the City of LA
- 1.5 million electric customers; 680,000 water customers
- Vertically integrated utility

# Water-Related Energy Use In California

## Energy Use Related to Water



Source:

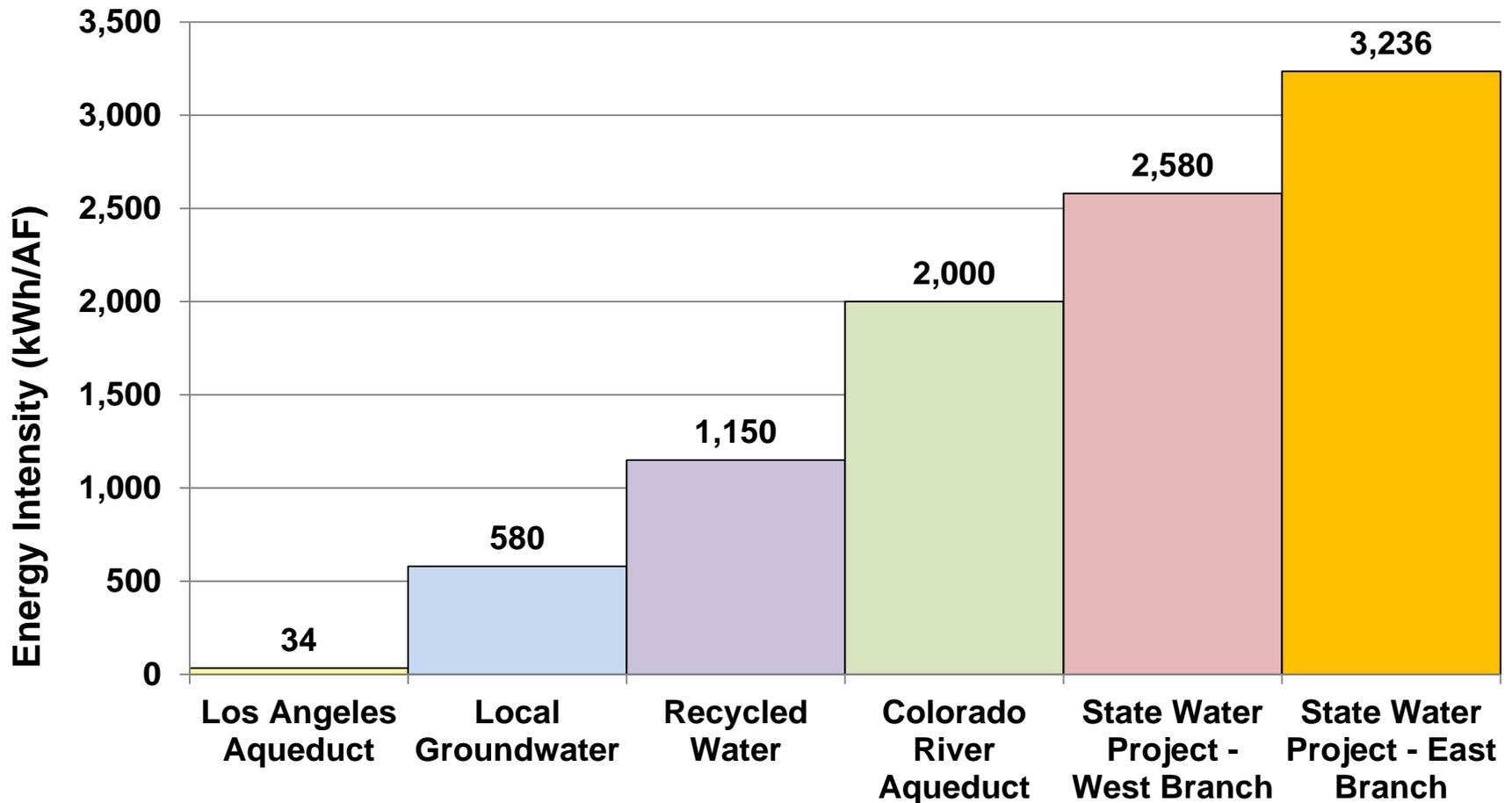
Department of Water Resources, 2014 California Water Plan Update 2013 Highlights

[http://www.water.ca.gov/waterplan/docs/cwpu2013/Final/00-CWP-Update2013\\_Highlights\\_FINAL\\_printsinglepage.pdf](http://www.water.ca.gov/waterplan/docs/cwpu2013/Final/00-CWP-Update2013_Highlights_FINAL_printsinglepage.pdf)

# Sources of Water for Los Angeles

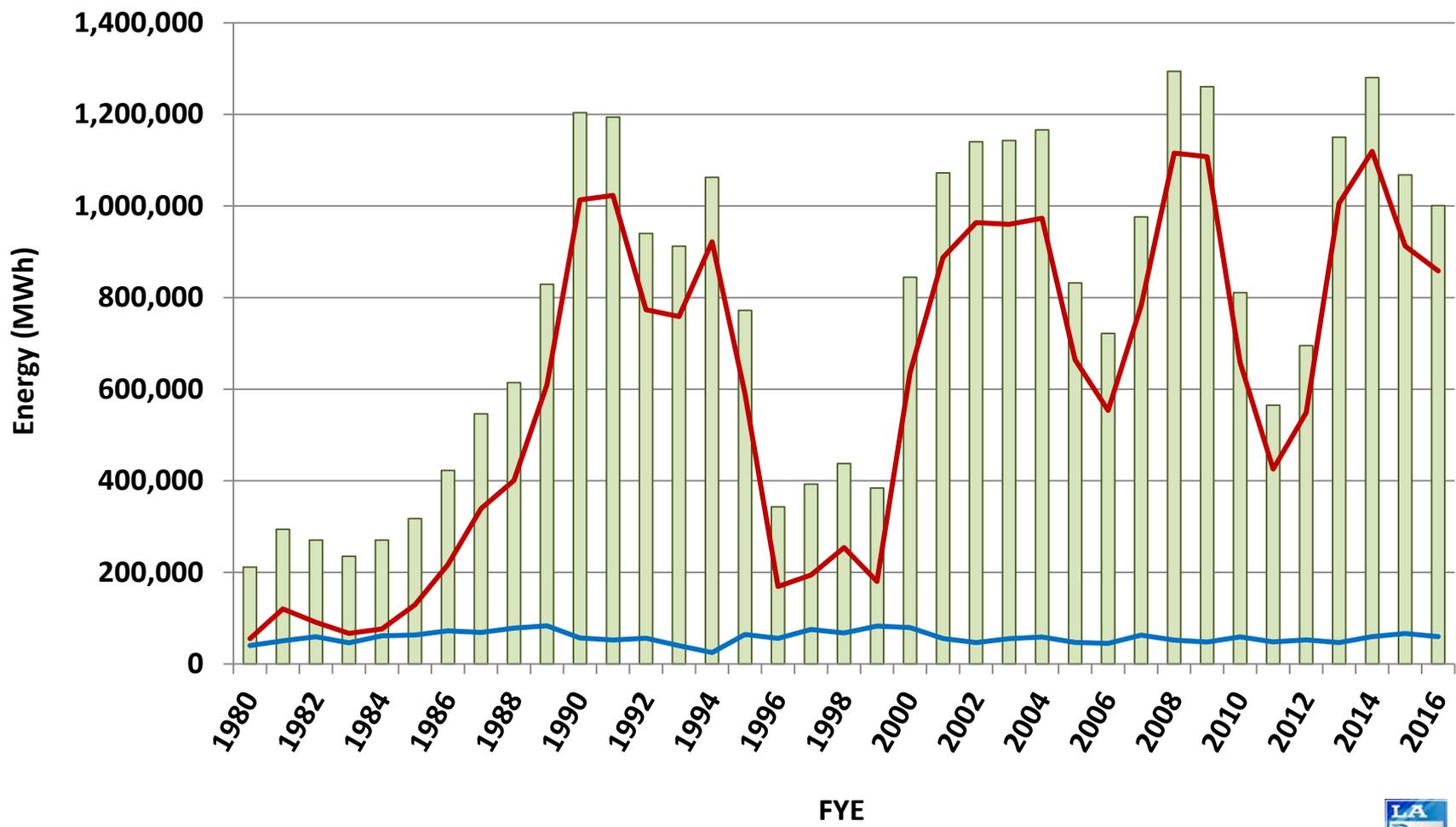


# Energy Intensity of LADWP Water Supplies



# LADWP Water Supply Energy Consumption

■ Total Energy Consumption   
 — MWD   
 — LAA+GW+RW

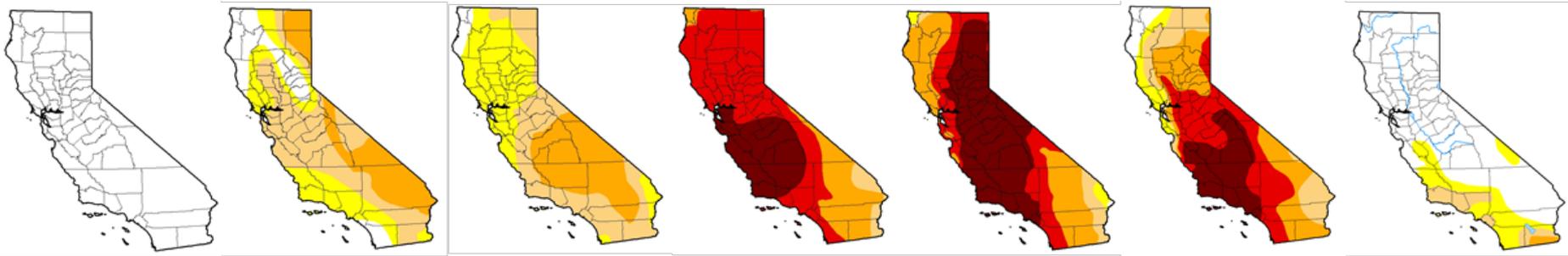


# Challenges

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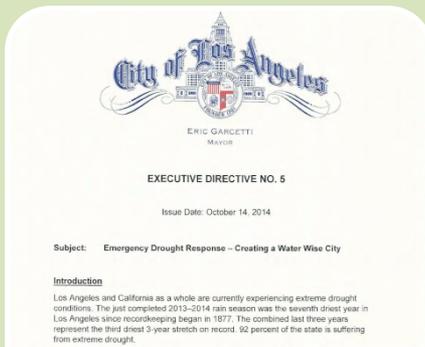
- Continuing drought cycles
- Climate change impacts
- Cost and availability of purchased water
- Population and economic growth
- Owens Lake Mitigation

## California Drought Maps 2011-2017



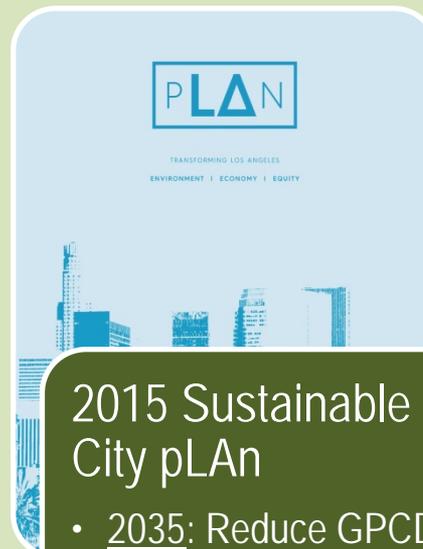
Source: U.S. Drought Monitor

# SOLUTIONS: Local Water Supply Program Supports City's Sustainable Water Mandates



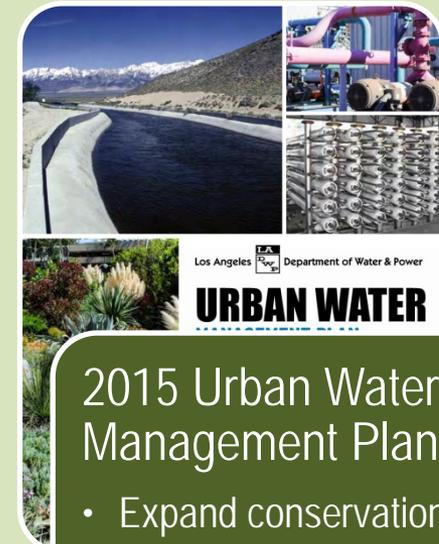
## 2014 Executive Directive No. 5

- 2017: Reduce GPCD by 20%
- Create an integrated strategy to increase local supplies



## 2015 Sustainable City pLAN

- 2035: Reduce GPCD by 25%
- 2025: Reduce purchased imports by 50%
- 2035: 50% of water locally sourced

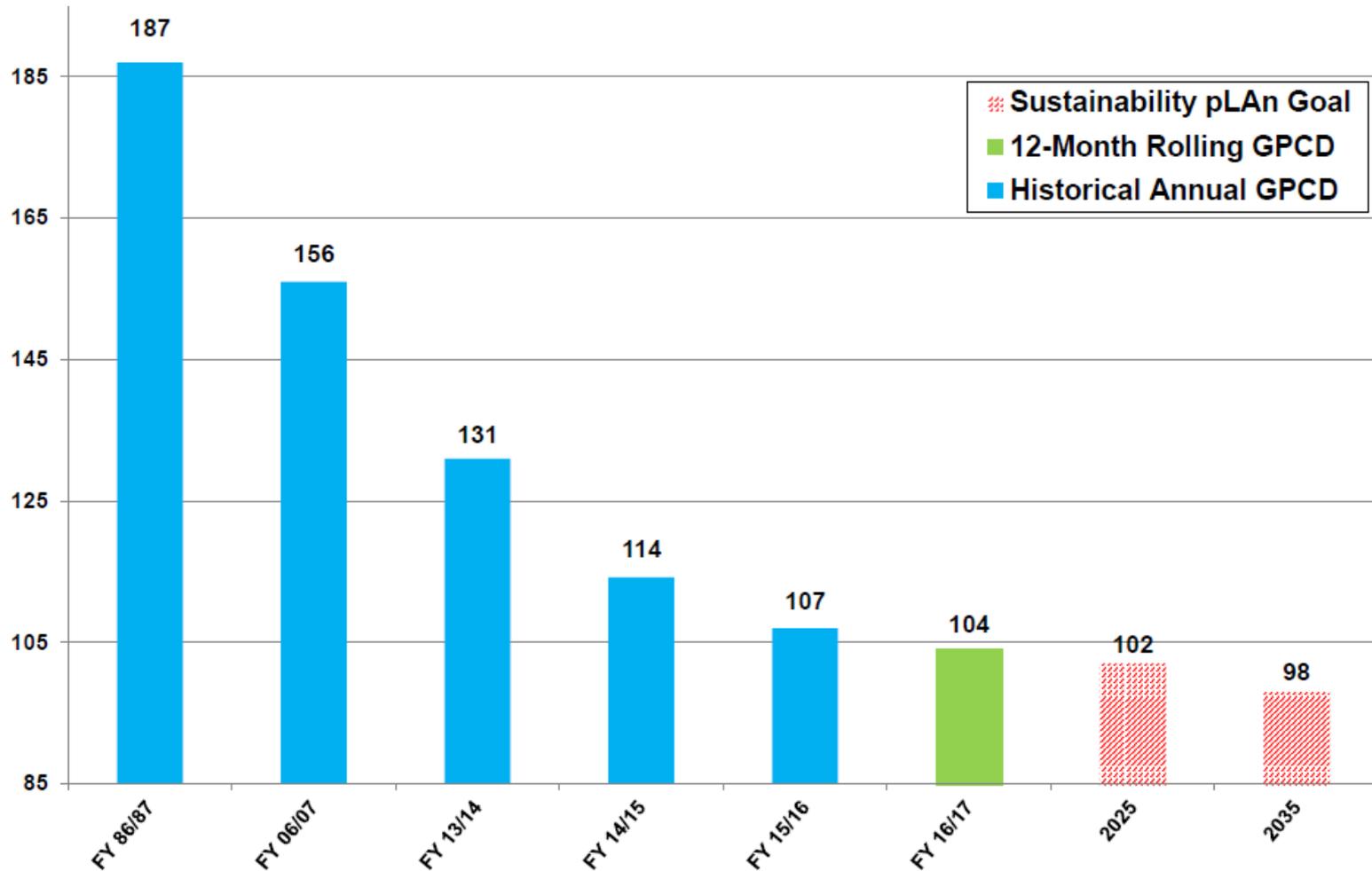


## 2015 Urban Water Management Plan

- Expand conservation
- Expand recycled water
- Enhance stormwater capture
- Remediate contamination in groundwater basin

# L.A.'s Drought Response

## LADWP 12-Month Rolling Total GPCD



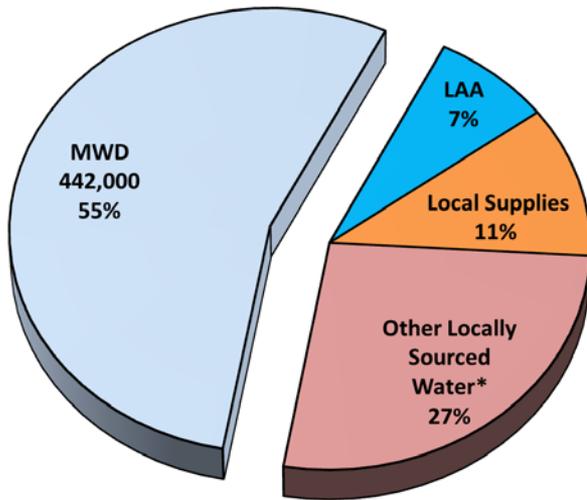
# Benefits of Water Conservation

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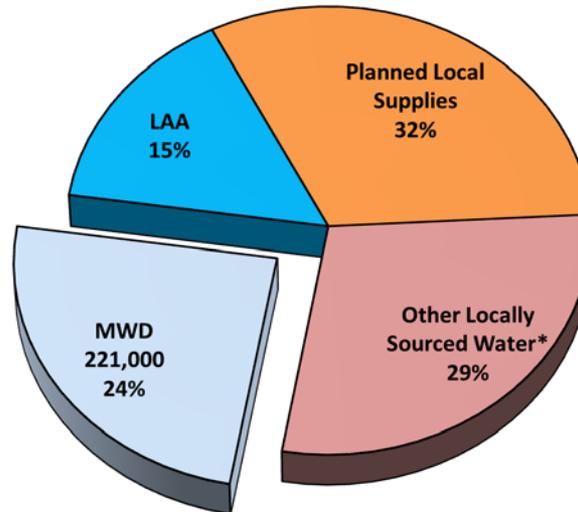
- ✓ Water Savings 57.8 billion gallons  
(November 2014 – Nov 2016)
- ✓ Energy savings 479,00 MWh  
(80,000 LA homes for 1 year)
- ✓ Avoided Carbon Emissions 322 million lbs CO2  
(31,000 passenger vehicles for 1yr)
- ✓ Cost Savings \$125 million  
(avoided water purchases)

# L.A.'s Future Water Supplies

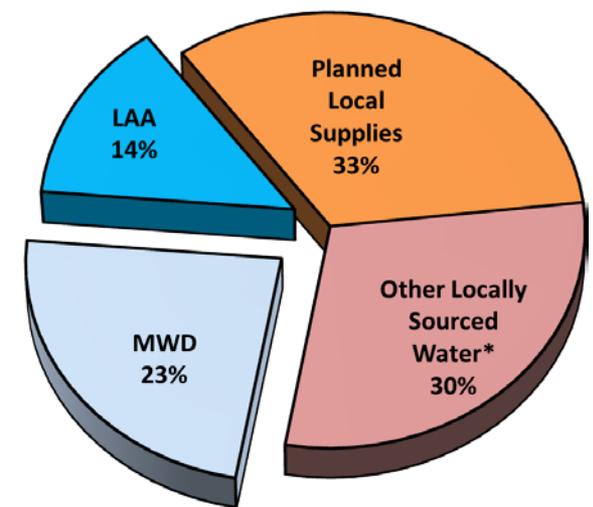
pLAN Baseline  
FYE 2014



pLAN Goal  
FYE 2025

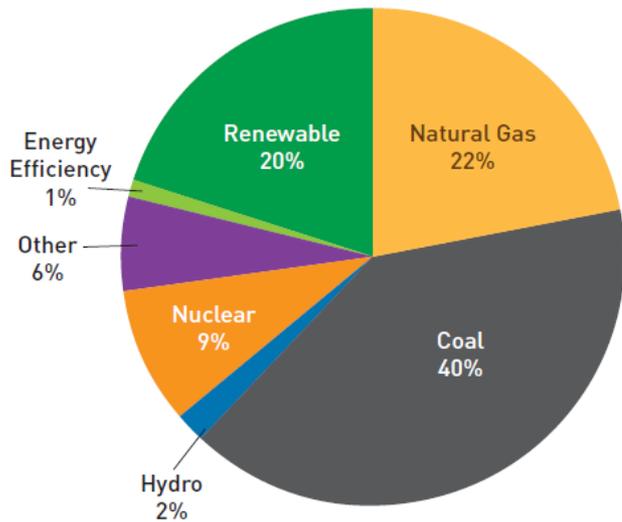


pLAN Goal  
FYE 2035

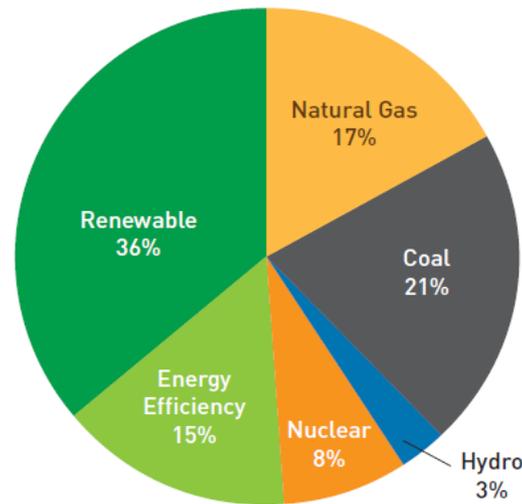


\*Other Locally Sourced Water consists of: Historical Conservation, Stormwater Capture, Beneficial Reuse/Other

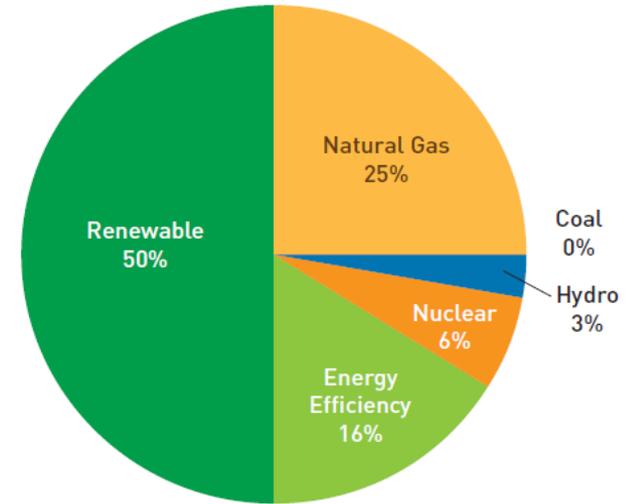
# L.A.'s Future Power Supplies



2014



2020



2030

# Questions?

